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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,612	01/23/2004	Chris McKenzie	29031.00	7278

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KNOXVILLE, TN 37950-1295

EXAMINER
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DUONG, THO V

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/763,612	Applicant(s) MCKENZIE ET AL.	
	Examiner Tho v Duong	Art Unit 3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 12, 13 and 20-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 14-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/23/2004</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Claims 12 and 20-23 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected of species A, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 6/24/2004. Claim 13 is further withdrawn from consideration since the claim does not direct to the elected species B but only direct to the non-elected species A (coil imbedded in a seat).

Applicant's election with traverse of species B in the reply filed on 6/24/2004 is acknowledged. The traversal is on the ground(s) that the examiner has not identified the portions of the claims that the examiner feels distinguish the species or otherwise provided reason for requiring the restriction. This is not found persuasive because the examiner has clearly identified the figures that corresponds to each species in the Office Action sent 6/4/2004. The distinguishing characteristic of the species should be stated for each species identified only in the absence of distinct figures or examples. See MPEP 809.02 (a). Furthermore, the argument that "the claims directed to each separated subject should be noted along with a statement of the subject matter to which they are drawn" is not persuasive because this statement in the MPEP is not applicable for the election of species requirement. See MPEP 814, page 800-46.

The examiner is regretted for failing to identify the attorney's telephone number in the submitted application.

The requirement is still deemed proper and is therefore made FINAL.

### ***Specification***

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The disclosure is objected to because of the following informalities: a portion of the title "Syst m" appears to be typographical error of "System".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Since claims 17-19 use means plus function format, it gives rise to the interpretation under 35 USC 112, par.6 in light of and consistent with the written description of the invention in the application. However, it is not clear which equivalent element(s) in the written description correspond to "a means for changing a temperature of a liquid" cited in line 3. There are several heat exchangers such as elements (1102, 110', 1104), which are all capable of performing a function of changing a temperature of a liquid, it is not clear which element the applicant is referring to. With regarding claim 18, it is not clear which equivalent element(s) in the written description correspond to "a means for controlling a temperature of said liquid". Does this means plus function corresponds to the controller or the temperature selector or the thermoelectric device?. Furthermore, in claim 19, it is not clear which equivalent element(s) in the written description correspond to "a means for transferring thermal energy between said means for changing said temperature and the environment". Does this means plus function corresponds to the tubes (1122) or the element (1102)? Claims 17-19, each contain means-plus-

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function clause, which do not have clear support or antecedent basis in the written description to satisfy the requirements of 35 U.S.C. 112 second paragraph.

Claims 17-19 are further rejected as can be best understood by the examiner.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-11 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Feher (US 5,117,638). Feher discloses (figures 1-2, and 6) an apparatus comprising a first heat exchanger (34) coupled to a seat (24); a second heat exchanger (20) in fluid communication with the first heat exchanger; a first pump (23) for forcing a first heat transfer fluid between the first heat exchanger and the second heat exchanger; a thermoelectric device (16) having a first surface and a second surface (upper and bellow); the first surface (bellow) thermally coupled to the second heat exchanger (20); and a third heat exchanger (18) thermally coupled to the second surface (upper) of the thermoelectric device. Feher further discloses (figure 10, column 2, lines 32-48) a controller providing power (electric current) to the thermoelectric device for selectively heating or cooling one of the surface depending on the direction of the electric current and a temperature selector (mode switch) in communication with the controller. With regarding claims 17-19, the thermoelectric device(16) is considered to read as a means for changing a temperature of a liquid; tubes (22) is considered to read as a means for transferring the liquid to a heat exchanger; the coils (34) is considered to read as a means for conducting thermal energy between

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the liquid and the seat; the switch mode is considered to read as means for controlling a temperature of the liquid; and heat exchanger (18) is considered to read as a means for transferring thermal energy between the thermoelectric device and the environment. As regarding claim 10, Feher discloses (column 2, lines 32-48) that the thermoelectric device (16) works in a heating mode or a cooling mode dependently on the direction of the electric current passing through the thermoelectric (the direction of the electric current depends on the polarity of the current voltage). Since the mode switch selects the system to work in a heating mode or cooling mode, the mode switch is inherently capable of performing a function of reversing a polarity of a direct current voltage applied to the thermoelectric device (16). With regarding claim 11, Feher discloses (figure 6 and column 5, lines 47-67) a blower that blow air between the third heat exchanger (18) to a radiator (chamber in the seat connected to the third heat exchanger by tubes 14). With regarding claims 7 and 8, the heat exchanger (18) is interpreted to be a second heat exchanger; the cooling or heating chamber in the seat is considered to be a first heat exchanger coupled to the seat; and the heat exchanger (20) is considered to be a third heat exchanger. Feher further discloses (figure 6, and column 5, lines 46-67) partitions (74) which is an equivalent as a means for forming an air chamber (75) in the second heat exchanger (18).

Claims 6-11 and 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Abadilla et al. (US 5,564,276). Abadilla discloses (figures 1-6 and column 3, lines 35-52) an apparatus comprising a first heat exchanger coupled to a seat (15); a second heat exchanger (20) in fluid communication with the first heat exchanger; a first pump (12) for forcing a first heat exchanger fluid between the first heat exchanger and the second heat exchanger; a thermoelectric device (18) having a first surface and a second surface; the first surface thermally coupled to the

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second heat exchanger; a third heat exchanger (20) thermally coupled the second surface of the thermoelectric device (18); a radiator (11) in fluid communication with the third heat exchanger; a second pump (13) for forcing a second heat transfer fluid between the third heat exchanger and the radiator; a controller (14) providing power to the thermoelectric device for selecting heating or cooling on one of the surfaces; and the second heat exchanger (20) including partitions forming channels (25) which is equivalent as a means for forming an air chamber since the channels (25) is capable of containing any air which present in the heat exchanger. Abadilla further discloses (column 3, line 40- column 6, lines 48) temperature selector (55); switches (67,69,82,84), which is also a safety cutout device, for reversing a polarity of a direct current voltage applied to the thermoelectric device or for stopping a direct current voltage applied to the thermoelectric device; and a thermistor (51) for sensing a temperature.

Note: Since claims 3 and 8 use the means plus function format, it gives rise to the interpretation under 35 U.S.C 112 sixth paragraph in light of and consistent with the written description of the invention in the application.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feher in view of Park (US 6,006,524). Feher substantially discloses all of applicant's claimed invention

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as discussed above except for the limitation of a safety cutoff switch and a thermistor for sensing the temperature. Park discloses (figures 2, 7 and column 3, line 1 – column 4, line 60) a cool system that utilizes a thermoelectric (10) for selecting of cooling or heating mode for the system, wherein the cooling system is partially controlled by thermistors (231,232) for sensing a temperature and a safety cutout device (SW1) for suspending the operation of the thermoelectric element (10) if the sensing temperature exceeds a selected temperature. The safety cutout device and the thermistors has been served for the purpose of enabling the cooling system to work in an appropriate mode depending on the pre-set temperature, which set by the user. Since Feher and Park are both from the same field of endeavor and/or analogous art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Park's teaching in Feher's device for the purpose of enabling the cooling system to work in an appropriate mode depending on the pre-set temperature, which set by the user.

Claims 1-5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abadilla et al. (US 5,564,276) in view of Lee (US 6,701,719). Abadilla discloses (figures 1-6 and column 3, lines 35-52) an apparatus comprising a first heat exchanger coupled to a seat (15); a second heat exchanger (20) in fluid communication with the first heat exchanger; a first pump (12) for forcing a first heat exchanger fluid between the first heat exchanger and the second heat exchanger; a thermoelectric device (18) having a first surface and a second surface; the first surface thermally coupled to the second heat exchanger; a third heat exchanger (20) thermally coupled the second surface of the thermoelectric device (18); a radiator (11) in fluid communication with the third heat exchanger; a second pump (13) for forcing a second heat transfer fluid between the third heat exchanger and the radiator; a controller (14) providing



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power to the thermoelectric device for selecting heating or cooling on one of the surfaces; and the second heat exchanger (20) including chambers (25) which is capable of containing any air which present in the heat exchanger. Abadilla further discloses (column 3, line 40- column 6, lines 48) temperature selector (55); switches (67,69,82,84), which is also safety cutout device, for reversing a polarity of a direct current voltage applied to the thermoelectric device or for stopping a direct current voltage applied to the thermoelectric device; and a thermistor (51) for sensing a temperature. Abadilla does not disclose a first heat exchanger is a bladder with channels for directing the first heat transfer fluid through the bladder. Lee discloses (figures 6,9 and column 3, line 56- column 41 line 17) a cooling system for a seat (40) that has a heat exchanger formed of liquid tight bladder through which a heat transfer fluid (6) is circulated through channels formed by elements (42) so that the heat transfer fluid passes smoothly and evenly through the seat (4) while achieving the heat exchanging effect on the seat. Since Abadilla and Lee are both from the same field of endeavor and/or analogous art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Lee's teaching in Abadilla's seat cooling system for the purpose of passing the heat transfer fluid smoothly and evenly through the seat while achieving the heat exchange effect on the seat.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Strachan et al. (US 5,288,336) discloses a thermoelectric energy conversion.

Zexel KK (JP 10000922A) discloses a vehicle seat air conditioner with peltier element.

Suzuki et al. (US 6,062,641) discloses a seat apparatus with air flow.

C.R. Lopp et al. (US 2,928,253) discloses a thermoelectric apparatus for cooling and heating liquid.

Ju (US 5,655,375) discloses a polarity switcher for a thermoelectric.

Quisenberry (US 5,097,829) discloses a temperature controlled cooling system.

Munson (US 6,770,085) discloses a heat absorbing pad.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tho Duong whose telephone number is (703) 305-0768. The examiner can normally be reached on from 9:30-6 PM.

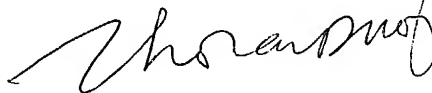
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet, can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.



TD

September 3, 2004



Tho Duong

Patent Examiner.